WHAT IS CLAIMED IS:

1. A vibration attenuator for an ultrasonic transducer having a transducer shaft, said attenuator comprising:

a compressible sleeve mountable on said shaft wherein said sleeve comprises vibration attenuating material;

a housing for said sleeve mountable on said shaft, and

a compression device attachable to said housing and for compressing said sleeve, wherein said sleeve snugly abuts against said shaft when compressed.

2. A vibration attenuator as in claim 1 wherein said sleeve is formed of a stack of deformable rings.

3. A vibration attenuator as in claim 1 wherein said housing is a cylinder having an internal cylindrical wall having a diameter to accommodate the sleeve.

4. A vibration attenuator as in claim 1 wherein said housing is a cylinder having an open end with an internal screw surface, and said compression device is a screw plug which screws into the open end and screw surface of the housing.

5. A vibration attenuator as in claim 1 wherein said deformable material is a valve stem packing material.

6. A vibration attenuator as in claim 1 wherein said housing, compressible sleeve, compression device are each coaxial with said shaft.

7. A vibration attenuator for an ultrasonic transducer having a shaft, said dampening device comprising:

a cylindrical housing having an internal cylindrical surface, an closed end with an aperture and an open end opposite to the closed end, wherein said internal cylindrical surface has a screw thread adjacent the open end;

a plurality of compressible rings arranged in a stack within the internal cylindrical surface of the housing, wherein said rings are coaxial with the housing, and

a screw plug having a screw thread to screw into the screw thread of the housing, an end which abuts against the stack of rings in the housing, and a conduit coaxial with the housing and rings, wherein the plug compresses the stack of ring as the plug screws into the housing,

wherein the transducer shaft extends through the housing, rings and plug, and the rings fit snugly against the shaft when the rings are compressed in the housing.

8. A vibration dampening as in claim 7 wherein said rings are formed of a valve stem packing material.

9. A vibration attenuator as in claim 7 wherein said housing, rings, plug are each coaxial with said shaft.

10. A vibration attenuator as in claim 7 wherein the plug is extendable into the housing so as to compress the stack at least thirty percent of an uncompressed length of the stack.

11. A method of attenuating vibration in an ultrasonic instrument having an ultrasonic transducer and a transducer shaft, said method comprising:

a. clamping a sleeve of compressible material around the shaft, and

b. attenuating ultrasonic vibrations travelling through the shaft by dampening the vibration with the sleeve.

12. A method as in claim 11 wherein the compressible material is clamped around the shaft by housing the material in a cylindrical housing and compressing the material within the housing so that the material expands radially inward against the shaft.

13. A method as in claim 12 wherein the compressible material is compressed by a plug which is screwed into one end of the housing.

14. A method as in claim 13 wherein the compressible material is compressed at least thirty percent of an uncompressed length of the material.

15. A method as in claim 11 wherein the compressible material is clamped to a shaft of a transmitting transducer.

16. A method as in claim 11 wherein the compressible material is clamped to a shaft of a receiving transducer and a second sleeve of compressible material is clamped to a shaft of a transmitting transducer.

17. A method as in claim 16 wherein the receiving transducer and transmitting transducer are components of a transit time ultrasonic flow meter.

18. A method as in claim 17 wherein the flow meter has a signal to noise ratio (SNR) of at least 20.

19. A method as in claim 11 wherein the attenuated ultrasonic vibrations are of a frequency of at least 20 kHz.

20. A method as in claim 11 wherein the compressible material encircles the shaft.